

JUN 22 2006

K06 1605

**510(k) Summary of Safety and Effectiveness: 21 CFR 807.92**

**Submitter's Name:** Toshiba America Medical Systems, Inc.  
**Address:** P.O. Box 2068, 2441 Michelle Drive Tustin, CA 92781-2068  
**Contact:** Paul Biggins, Regulatory Affairs Specialist  
**Telephone No.:** (714) 730-5000

**Device Proprietary Name:** Nemio XG, SSA-580A  
**Common Name:** Ultrasound Imaging System

**Classification:**

**Regulatory Class:** II  
**Review Category:** Tier II

Ultrasonic Pulsed Doppler Imaging System - Procode: 90-IYN  
[Fed.Reg.No.:892.1550]  
Ultrasonic Pulsed Echo Imaging System - Procode: 90-IYO  
[Fed.Reg.No.:892.1560]  
Diagnostic Ultrasonic Transducer - Procode: 90-ITX  
[Fed. Reg. No.: 892.1570]

**Identification of Predicate Devices:**

Toshiba America Medical Systems believes that this device is substantially equivalent to the following device; SSA-550A/NEMIO Diagnostic Ultrasound System, 510(k) control number K010631.

**Device Description:**

The Nemio XG will be offered in one variation which is a mobile system. It is a Track 3 device that employs a wide array of probes that include flat linear array, convex linear array, and sector array with a frequency range of approximately 2 MHz to 12 MHz.

**Intended Use:**

The Nemio XG system is intended to be used for the following type of studies; fetal, abdominal, intraoperative, pediatric, small organs, neonatal cephalic, adult cephalic, cardiac, transrectal, transvaginal, transesophageal, peripheral vascular, musculo-skeletal (both conventional and superficial)..

**Safety Considerations:**

The device is designed and manufactured in conjunction with the Quality System Regulation, IEC- 60601 (applicable portions), and IEC 60601-2-37. international standard for ultrasound safety. This unit is similar to that of the Toshiba SSA-550A/NEMIO and engineering assessments identify no new issues of risk or safety.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

JUN 22 2006

Toshiba America Medical Systems, Inc.  
% Mr. Mark Job  
Responsible Third Party Official  
Regulatory Technology Services LLC  
1394 25<sup>th</sup> Street NW  
BUFFALO MN 55313

Re: K061605

Trade Name: NEMIO XG SSA-580A Diagnostic Ultrasound System  
Regulation Number: 21 CFR 892.1550  
Regulation Name: Ultrasonic pulsed doppler imaging system  
Regulation Number: 21 CFR 892.1560  
Regulation Name: Ultrasonic pulsed echo imaging system  
Regulation Number: 21 CFR 892.1570  
Regulation Name: Diagnostic ultrasonic transducer  
Regulatory Class: II  
Product Code: IYN, IYO, and ITX  
Dated: June 6, 2006  
Received: June 9, 2006

Dear Mr. Job:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the NEMIO XG SSA-580A Diagnostic Ultrasound System as described in your premarket notification:



*Protecting and Promoting Public Health*

Transducer Model Number

PLM-703AT

PC-19M

PSM-20CT

PSM-30BT

PEF-510MB

PVM-651VT

PSM-375AT

PLM-1202S

PVM-740RT

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This determination of substantial equivalence is granted on the condition that prior to shipping the first device, you submit a postclearance special report. This report should contain complete information, including acoustic output measurements based on production line devices, requested in Appendix G, (enclosed) of the Center's September 30, 1997 "Information for Manufacturers Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers." If the special report is incomplete or contains unacceptable values (e.g., acoustic output greater than approved levels), then the 510(k) clearance may not apply to the production units which as a result may be considered adulterated or misbranded.

The special report should reference the manufacturer's 510(k) number. It should be clearly and prominently marked "ADD-TO-FILE" and should be submitted in duplicate to:


Food and Drug Administration  
Center for Devices and Radiological Health  
Document Mail Center (HFZ-401)  
9200 Corporate Boulevard  
Rockville, Maryland 20850

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>

If you have any questions regarding the content of this letter, please contact Ralph Shuping at (301) 594-1212.

Sincerely yours,

  
*for* Nancy C. Brogdon  
Director, Division of Reproductive,  
Abdominal and Radiological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure(s)

## Diagnostic Ultrasound Indications for Use Form

System X Transducer \_\_\_\_\_  
 Model Nemio XG, SSA-580A  
 510(k) Number(s) \_\_\_\_\_

Kd61605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal		N	N	N	N	N	N	N	N	N
Abdominal		N	N	N	N	N	N	N	N	N
Intraoperative (Specify)		N	N	N		N	N	N	N	N
Intraoperative Neurological										
Pediatric		N	N	N	N	N	N	N	N	N
Small Organ (Specify)		N	N	N		N	N	N	N	N
Neonatal Cephalic		N	N	N	N	N	N	N	N	N
Adult Cephalic		N	N	N	N	N	N	N	N	N
Cardiac		N	N	N	N	N	N	N	N	N
Transesophageal		N	N	N	N	N	N	N	N	N
Transrectal		N	N	N		N	N	N	N	N
Transvaginal		N	N	N		N	N	N	N	N
Transurethral										
Intravascular										
Peripheral Vascular		N	N	N		N	N	N	N	N
Laparoscopic										
Musculo-skeletal Superficial		N	N	N		N	N	N	N	N
Musculo-skeletal Conventional		N	N	N		N	N	N	N	N
Endoscopic		N	N	N		N	N	N	N	
Other (specify)										

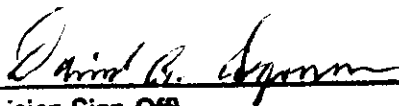
N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: \_\_\_\_\_ Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

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Concurrence of CDRH, Office of Device Evaluation (ODE)  
 Prescription Use (Per 21 CFR 801.109)

  
 \_\_\_\_\_  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal,  
 and Radiological Devices  
 510(k) Number Kd61605

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PLM-703AT  
510(k) Control Number:

K761605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (Specify)		P	P	P		P	P	P	P	P
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular		P	P	P		P	P	P	P	P
Laparoscopic										
Musculo-skeletal Superficial		P	P	P		P	P	P	P	P
Musculo-skeletal Conventional		P	P	P		P	P	P	P	P
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

*David H. Legman*

(Division Sign-Off)

Division of Reproductive, Abdominal,  
and Radiological Devices

510(k) Number

K061605

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PC-19M

510(k) Control Number:

K061605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Other (Specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric					P					
Small Organ (Specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac					P					
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Previous 510(k) control # k010361

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Concurrence of CDRH, Office of Device Evaluation (ODE)

*David A. Agnew*

(Division Sign-Off)

Division of Reproductive, Abdominal,  
and Radiological Devices

510(k) Number

K061605

Prescription Use (Per 21 CFR 801.109)

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PSM-20CT

510(k) Control Number:

K061605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (Specify)										
Neonatal Cephalic		P	P	P	P	P	P	P	P	P
Adult Cephalic		P	P	P	P	P	P	P	P	P
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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Concurrence of CDRH, Office of Device Evaluation (ODE)

*David R. Depina*  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal,  
 and Radiological Devices  
 510(k) Number K061605

Prescription Use (Per 21 CFR 801.109)



# EXISTING TRANSDUCER TABLE

Transducer Model Number: PSM-30BT

510(k) Control Number:

K061605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal										
Abdominal		E	E	E	E	E	E	E	E	E
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric		E	E	E	E	E	E	E	E	E
Small Organ (Specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac		E	E	E	E	E	E	E	E	E
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

Added under appendix E to 510(k) control # k010361.

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Concurrence of CDRH, Office of Device Evaluation (ODE)

*David A. [Signature]*

(Division Sign-Off)

Division of Reproductive, Abdominal, and Radiological Devices

510(k) Number

K061605

Prescription Use (Per 21 CFR 801.109)

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PEF-510MB

510(k) Control Number:

K461605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (Specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal		P	P	P	P	P	P	P	P	P
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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(Division Sign-Off)

Division of Reproductive, Abdominal,  
and Radiological Devices

510(k) Number

K061605

Prescription Use (Per 21 CFR 801.109)

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PVM-651VT  
510(k) Control Number:

K061605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Other (Specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (Specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal		P	P	P		P	P	P	P	P
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

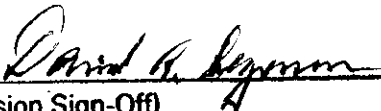
N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: \_\_\_\_\_ Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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(Division Sign-Off)  
Division of Reproductive, Abdominal,  
and Radiological Devices  
510(k) Number K061605

Prescription Use (Per 21 CFR 801.109)

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PSM-375AT  
510(k) Control Number:

K061605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal		P	P	P		P	P	P	P	P
Abdominal		P	P	P		P	P	P	P	P
Intraoperative (Specify)										
Intraoperative Neurological										
Pediatric		P	P	P		P	P	P	P	P
Small Organ (Specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/PWD; BDF/PWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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Concurrence of CDRH, Office of Device Evaluation (ODE)

*David R. [Signature]*  
(Division Sign-Off)  
Division of Reproductive, Abdominal,  
and Radiological Devices  
510(k) Number K061605

Prescription Use (Per 21 CFR 801.109)

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PLM-1202S

510(k) Control Number:

K461605

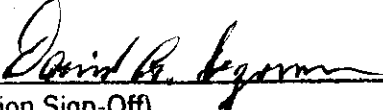
Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal										
Abdominal										
Intraoperative		P	P	P		P	P	P	P	P
Intraoperative Neurological										
Pediatric										
Small Organ (Specify)		P	P	P		P	P	P	P	P
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular		P	P	P		P	P	P	P	P
Laparoscopic										
Musculo-skeletal Superficial		P	P	P		P	P	P	P	P
Musculo-skeletal Conventional		P	P	P		P	P	P	P	P
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/EWD; BDF/EWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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(Division Sign-Off)  
Division of Reproductive, Abdominal,  
and Radiological Devices  
Date: Number K061605

Prescription Use (per 21 CFR 801.109)

# EXISTING TRANSDUCER TABLE

Transducer Model Number: PVM-740RT

510(k) Control Number:

K061605

Clinical Application	Mode of Operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (Specify)	Harmonic Imaging
Ophthalmic										
Fetal										
Abdominal										
Intraoperative										
Intraoperative Neurological										
Pediatric										
Small Organ (Specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal		P	P	P		P	P	P	P	P
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Superficial										
Musculo-skeletal Conventional										
Other (specify)										

N= new indication; P = Previously Cleared by FDA; E = Added under Appendix E (LTF)

Additional Comments: Combined Modes: B/M; B/EWD; BDF/EWD; BDF/MDF; B-TDI; M-TDI

Previous 510(k) control # k010361

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Concurrence of CDRH, Office of Device Evaluation (ODE)

*David A. Lyman*  
(Division Sign-Off)  
Division of Reproductive, Abdominal,  
and Radiological Devices  
PVM Number K061605

Prescription Use (per 21 CFR 801.109)